

PTO/SB/08A (08-03)

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**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

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Sheet 1 of 9

Complete if Known

Application Number	10/662,641
Filing Date	September 15, 2003
First Named Inventor	Standing, et al.
Group Art Unit	1623
Examiner Name	Unassigned
Attorney Docket Number	06171.105097 IDX 1021

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U.S. PATENT DOCUMENTS

Examiner Initials *	Cite No. ¹	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code ² (if known)			
	AA	4,916,122	A	Chu et al.	04-10-1990	
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		Office	Number	Kind Code ² (if known)				
	BA	EP	0,350,287	A2	Vical, Inc.	01-10-1990		
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	BC	EP	0,355,131	B1	Pro-neuron, Inc.	09-04-1996		
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(72)	CA	AHMED, S.N.S., et al., "Early detection of viral resistance by determination of hepatitis B virus polymerase mutations in patients treated by lamivudine for chronic hepatitis B," <i>Hepatology</i> , 32(5):1078-1088 (November 2000)	
	CB	ALLEN, M. I., et al., "Identification and characterization of mutations in hepatitis B virus resistant to lamivudine," <i>Hepatology</i> 27(6):1670-1677 (June 1998).	
	CC	ARNER, E.S.J., et al., "Mammalian Deoxyribonucleoside Kinases," <i>Pharm. Ther.</i> , 67(2), 155-186 (1995).	
	CD	BERK, A.J., et al., "A Genetically Distinct Tymidine Kinase in Mammalian Mitochondria," <i>J Biol Chem</i> , 248(8):2722-2729 (1973).	
	CE	BESTWICK, R.K., et al., "Selective Expansion of Mitochondrial Nucleoside Triphosphate Pools in Antimetabolite-treated HeLa Cells," <i>J. Biol. Chem.</i> , 257(16):9300-9304 (1982).	
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Standing, *et al.*

Group Art Unit

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OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

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	DA	CHEN, M.S., <i>et al.</i> , "Characterization of Pyrimidine Deoxyribonucleoside Kinase (Thymidine Kinase) and Thymidylate Kinase as a Multifunctional Enzyme in Cells Transformed by Herpes Simplex Virus Type 1 and in Cells Infected with Mutant Strains of Herpes Simplex Virus," <i>J Virol.</i> , 30(3):942-945 (June 1979).	
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	FA	IMAI, K., et al., "Studies on Phosphorylation. IV. Selective Phosphorylation of the Primary Hydroxyl Group in Nucleosides." <i>J. Org. Chem.</i> , 34(6):1547-1550 (June 1969).	
	FB	JONES, R.J., et al., "Mini Review: Nucleotide prodrugs," <i>Antiviral Research</i> , 27:1-17 (1995).	
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	FD	KORBA, B.E., et al., "A cell culture assay for compounds which inhibit hepatitis B virus replication," <i>Antiviral Res.</i> , 15:217-228 (1991).	
	FE	KRAYEVSKY, A.A., et al., "Can a Substrate Enantiomer Be a Substrate for the Same Enzyme?," <i>Molecular Biology</i> , 30(5, Part 1):585-591 (1996).	
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	FH	LABENZ, J., et al., "Analysis of the TK Enzyme Complex Induced by HSV Types 1 and 2 by Means of Isoelectric Focusing and Polyacrylamide Gel Electrophoresis," <i>Arch. Virol.</i> , 71:235-249 (1982).	
	FI	LIN, T.-S., et al., "Synthesis and Biological Evaluation of 2',3'-Dideoxy-L-pyrimidine Nucleosides as Potential Antiviral Agents against HIV and HBV," <i>J. Med. Chem.</i> , 37:798-803 (1994).	
	FJ	LIN, T.-S., et al., "Synthesis of Several Pyrimidine L-Nucleoside Analogues as Potential Antiviral Agents," <i>Tetrahedron Letters</i> , 51(4):1055-1068 (1995).	
	FK	LIN, T.S., et al., "Design and Synthesis of 2',3'-Dideoxy-2', 3'-didehydro-β-L-cytidine (β-L-d4C) and 2',3'-Dideoxy-2', 3'-didehydro-β-L-5-fluorocytidine (β-L-Fd4C), Two Exceptionally Potent Inhibitors of Human Hepatitis B Virus (HBV) and Potent Inhibitors of Human Immunodeficiency Virus (HIV) <i>In Vitro</i> ," <i>J. Med. Chem.</i> , 39(9):1757-1759 (April 26, 1996).	
	FL	MAGA, G., et al., "Lack of stereospecificity of suid pseudorabies virus thymidine kinase," <i>Biochem. J.</i> , 294(2):381-385 (September 1, 1993).	
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	FN	MELEGARI, M., et al., "Hepatitis B virus mutants associated with 3TC and famciclovir administration are replication defective," <i>Hepatology</i> 27(2):628-633 (February 1998).	

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Application Number	10/662,641
Filing Date	September 15, 2003
First Named Inventor	Standing, et al.
Group Art Unit	1623
Examiner Name	Unassigned
Attorney Docket Number	06171.105097 IDX 1021

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OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ⁶
	GA	NAKAYAMA, C., et al., "Synthetic Nucleosides and Nucleotides. XX. Synthesis of Various 1-β-Xylofuranosyl-5-Alkyluracils and Related Nucleosides," <i>Nucleosides & Nucleotides</i> , 1(2):139-146 (1982).	
	GB	NORBECK, D.W., et al., "A new 2',3'-dideoxynucleoside prototype with <i>in vitro</i> activity against HIV," <i>Tetrahedron Letters</i> , 30(46):6263-6266 (1989).	
	GC	ONO, S. K., et al., "The polymerase L528M mutation cooperates with nucleotide binding-site mutations, increasing hepatitis B virus replication and drug resistance," <i>J. Clin. Invest.</i> , 107:449-455 (2001).	
	GD	ONO-NITA, S.K., et al., "YMDD Motif in Hepatitis B Virus DNA Polymerase Influences on Replication and Lamivudine Resistance: A Study by <i>In Vitro</i> Full-Length viral DNA Transfection," <i>Hepatology</i> , 29(3):939-945 (March 1999).	
	GE	ONO-NITA, S.K., et al., "Susceptibility of lamivudine-resistant hepatitis B virus to other reverse transcriptase inhibitors," <i>The Journal of Clinical Investigation</i> , 3(12):1635-1640 (June 1999).	
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	GG	PLACIDI, I., et al., "Cellular pharmacology of β-L-thymidine and β-L-2'-deoxycytidine in HepG2 cells and primary rat, monkey and human hepatocytes," <i>Antivir. Ther.</i> , 4(Suppl.4):46-47, abstract A122 (3 rd Int. Conf. Ther. Vir. Hepatitis) (1999).	
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	GJ	ROBINS, M.J., et al., "Nucleic Acid Related Compounds. 42. A General Procedure for the Efficient Deoxygenation of Secondary Alcohols. Regiospecific and Stereoselective Conversion of Ribonucleosides to 2'-Deoxynucleosides," <i>J. Am. Chem. Soc.</i> , 105:4059-4065 (1983).	
	GK	SANEYOSHI, M., et al., "Synthetic Nucleosides and Nucleotides. XIII. Stannic Chloride Catalyzed Ribosylation of Several 6-Substituted Purines," <i>Chem. Pharm. Bull.</i> , 27:2518-2521 (1979).	
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				Application Number	10/662,641
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Filing Date	September 15, 2003
				First Named Inventor	Standring, <i>et al.</i>
				Group Art Unit	1623
				Examiner Name	Unassigned
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	HA	SCHINAZI, R.F., <i>et al.</i> , "Selective Inhibition of Human Immunodeficiency Viruses by Racemates and Enantiomers of <i>cis</i> -5-Fluoro-1-[2-(Hydroxymethyl)-1,3-Oxathiolane-5-yl] Cytosine," <i>Antimicrobial Agents and Chemotherapy</i> , 36(11):2423-2431 (November 1992).	
	HB	SEIFER, M., Hamatake R, Bifano M, Standring DN. "Generation of replication-competent hepatitis B virus nucleocapsids in insect cells," <i>J. Virol.</i> , 72(4):2765-2776 (April 1998).	
	HC	SEIGNE' RES, B., <i>et al.</i> , "Duck hepatitis B virus polymerase gene mutants associated with resistance to lamivudine have a decreased replication capacity in vitro and in vivo," <i>J. Hepatol.</i> 34:114-122 (2001).	
	HD	SHUTO, S., <i>et al.</i> , "A facile one-step synthesis of 5'-phosphatidyl nucleosides by an enzymatic two-phase reaction," <i>Tetrahedron Letters</i> , 28(2):199-202 (1987).	
	HE	SÖDERLUND, J.C.F., "Mitochondrial versus cytosolic activities of deoxyribonucleoside salvage enzymes," in <i>Purine and Pyrimidine Metabolism in Man VIII</i> , A. Shota & M. Taylor (Eds.), Plenum Press, New York, 1995, pp. 201-204.	
	HF	SPADARI, S., <i>et al.</i> , "L-Thymidine is Phosphorylated by Herpes Simplex Type I Thymidine Kinase and Inhibits Viral Growth," <i>J. Med. Chem.</i> , 35(22):4214-4220 (1992).	
	HG	STUYVER, L. J., <i>et al.</i> , "Nomenclature for antiviral-resistant human hepatitis B virus mutations in the polymerase region," <i>Hepatology</i> 33(3):751-757 (March 2001).	
	HH	TYRSTED, G., <i>et al.</i> "Inhibition of the synthesis of 5-phosphoribosyl-1-pyrophosphate by 3'-deoxy-adenosine and structurally related nucleoside analogs." <i>Biochim. Biophys. Acta.</i> , 155(2):619-622 (February 26, 1968).	
	HI	VERRI, A., <i>et al.</i> , "Lack of enantiospecificity of human 2'-deoxycytidine kinase: relevance for the activation of β -L-deoxycytidine analogs as antineoplastic and antiviral agents," <i>Molecular Pharmacology</i> , 51(1):132-138 (January 1997).	
	HJ	VERRI, A., <i>et al.</i> , "Relaxed Enantioselectivity of Human Mitochondrial Thymidine Kinase and Chemotherapeutic Uses of L-Nucleoside Analogues," <i>Biochem. J.</i> , 328(1):317-320 (November 15, 1997).	
	HK	Von JANTA-LIPINSKI, M., <i>et al.</i> , "Newly Synthesized L-Enantiomers of 3'-Fluoro-Modified β -2'-Deoxyribonucleoside 5'-Triphosphates Inhibit Hepatitis B DNA Polymerase but not the Five Cellular DNA Polymerases α , β , γ , δ , and ϵ Nor HIV-1 Reverse Transcriptase," <i>J. Medicinal Chemistry</i> , 41(12):2040-2046 (May 21, 1998).	
	HL	WANG, L., <i>et al.</i> , "Recovery of Liver Sinusoidal Endothelial Cell Function over Time after Hypothermic Preservation in Rat Orthotopic Liver Transplantation," AASLD abstracts published in <i>Hepatology</i> , 24(No. 4, Pt. 2):431A, Abstract No. 1219 (1996).	

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Application Number

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First Named Inventor

Standing, *et al.*

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	IA	YING, C., <i>et al.</i> , "Inhibition of the replication of the DNA polymerase M550V mutation variant of human Hepatitis B Virus by adefovir, tenofovir, L-FMAU, DAPD, penciclovir and lobucavir," <i>J. Viral Hepatitis</i> , 7:161-165 (2000).	
	IB	ZEDECK, M.S., <i>et al.</i> , "Inhibition of the steroid-induced synthesis of D5-3-ketosteroid isomerase in <i>Pseudomonas testosterone</i> by a new purine deoxyribonucleoside analog: 6-chloro-8-aza-9-cyclopentylpurine," <i>Mol. Pharmacol.</i> , 3(4):386-395 (1967).	
	IC	ZHANG, W., <i>et al.</i> , "Removal of Silyl Protecting Groups from Hydroxyl Functions with Ammonium Fluoride in Methanol," <i>Tetrahedron Letters</i> , 33(9):1177-1180 (1992).	
	ID	ZHU, Y.-L., <i>et al.</i> , "Inhibition of Replication of Hepatitis B Virus by Cytallene In Vitro," <i>Antimicrobial Agents and Chemotherapy</i> , 41(8):1755-1760 (August 1997).	
	IE	ZHU, Y.-L., <i>et al.</i> , "Anti-Hepatitis B Virus Activity and Metabolism of 2',3'-dideoxy-2',3'-didehydro-β-L(-)-5-Fluorocytidine," <i>Antimicrobial Agents and Chemotherapy</i> , 42(7):1805-1810 (July 1998).	
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	IG	ZOULIM, F., <i>et al.</i> , "Drug therapy for chronic hepatitis B: Antiviral efficacy and influence of hepatitis B virus polymerase mutations on the outcome of therapy," <i>J. Hepatology</i> , 29:151-168 (1989).	
	IH	ZOULIM, F., "Evaluation of novel strategies to combat hepatitis B virus targeting [sic] wild-type and drug-resistant mutants in experimental models," <i>Antivir. Chem. Chemother.</i> , 12(Suppl. 1):131-142 (2001).	

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